**Notes on Exam 1, Math 544, Summer, 2012.**

1. Exam 1 covers 1.1–1.3, 1.5, 1.6, the part of section 1.7 about linearly independent and linearly dependent vectors. You are not responsible for non-singular matrices yet. In 1.7 you are responsible for problems 1, 3, 5, 11, 13, 29, 31, 47, 48, 50, 51.

2. Be able to define "linearly independent".

3. The material on the old exams which is covered on your exam 1:
   (a) Exam 1's:
   97: 1, 2, 3, 4, 5, 7, 10.
   98: 1, 2, 3, 4, 5, 6, 7, 8, 9.
   01: 1, 4, 5, 6, 7.
   02: 1, 2, 3, 6.
   spring 03: 1, 2, 5, 8, 10.
   summer 03: 1, 2, 3, 4, 5, 6, 7, 8, 9.
   04: 1, 2, 3, 4, 5.
   summer 05: all
   fall 05: all
   summer 06: 1, 2, 4, 6, 7.
   fall 06: all
   summer 07: 1, 4, 5, 6, 7.
   fall 09: 1, 2, 4, 5, 6, 7, 8, 9, 12.
   spring 11: 1, 2, 6, 7, 8, 9.
   (b) Exam 2's:
   97: 1.
   98: 1, 5, 6, 10.
   01: 2, 7, 8, 9, 10.
   02: 1, 7.
   spring 03: 1, 4a, 4b, 4c, 6.
   summer 03: 1, 4, 5, 7, 8, 9.
   04: 1, 3, 4, 6.
   summer 05: 1, 2, 6, 7.
   fall 05: 1, 8.
   summer 06: 9.

fall 06: 2, 8.
summer 07: 4, 5, 6, 7, 8.
spring 11: 1, 7, 9.

(c) Exam 3's:
01: 4, 10.
02: 6.
summer 03: 1.

(d) Final Exams:
97: 9 (The matrices $A$ and $b$ are given before problem 6.), 14.
98: 4, 5, 6.
01: 4, 10e, 10f.
02: 3, 8 (Solve $Ax = b$ and then stop.), 15.
spring 03: 10, 16, 17, 19.
summer 03: 11, 16, 17abc.
04: 1ab, 4.
summer 05: 1ab.
fall 05: 1ab, 6, 16.
summer 06: 2, 3abc.
fall 06: 1, 6a.
summer 07: 2.
fall 09: 1.
spring 11: 1.